



# Abell S1077

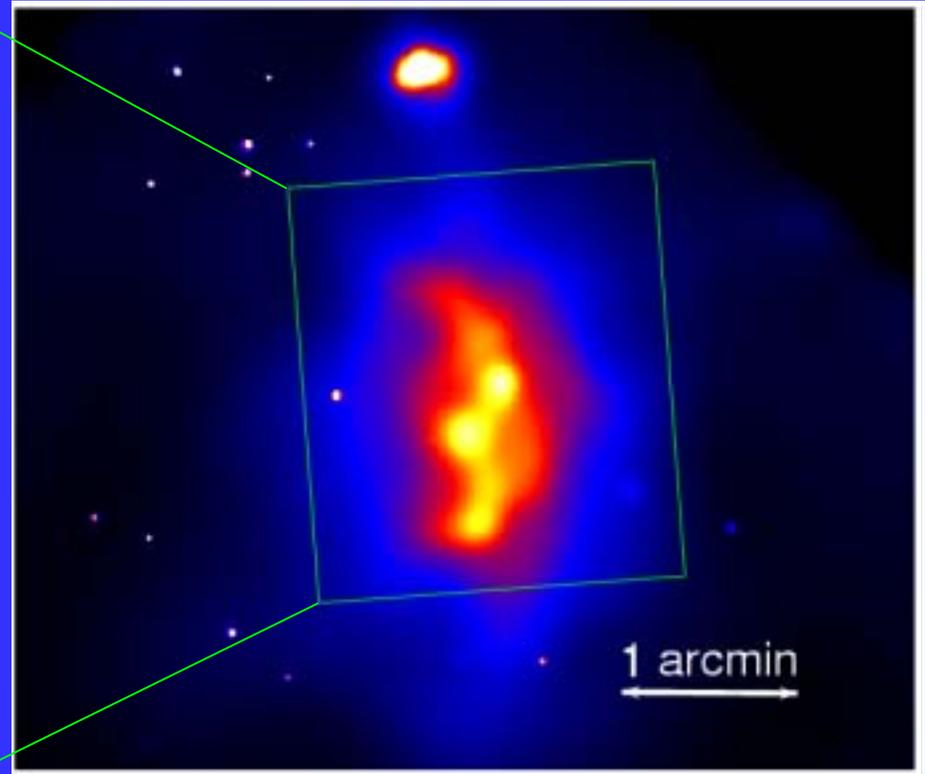
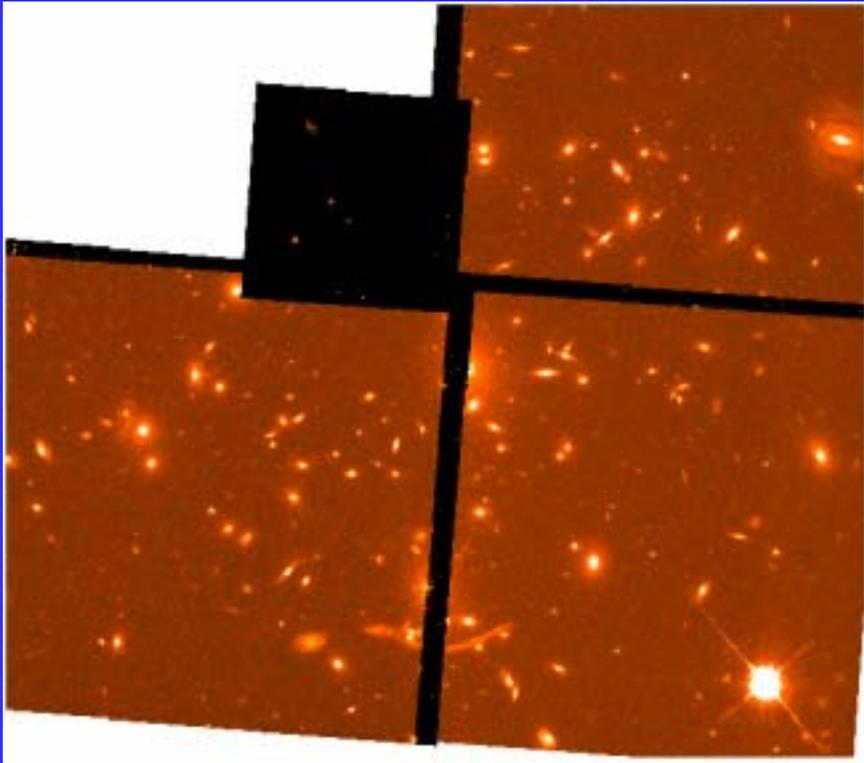
a cluster showing multiple  
merging activity

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Center for Space Research, MIT

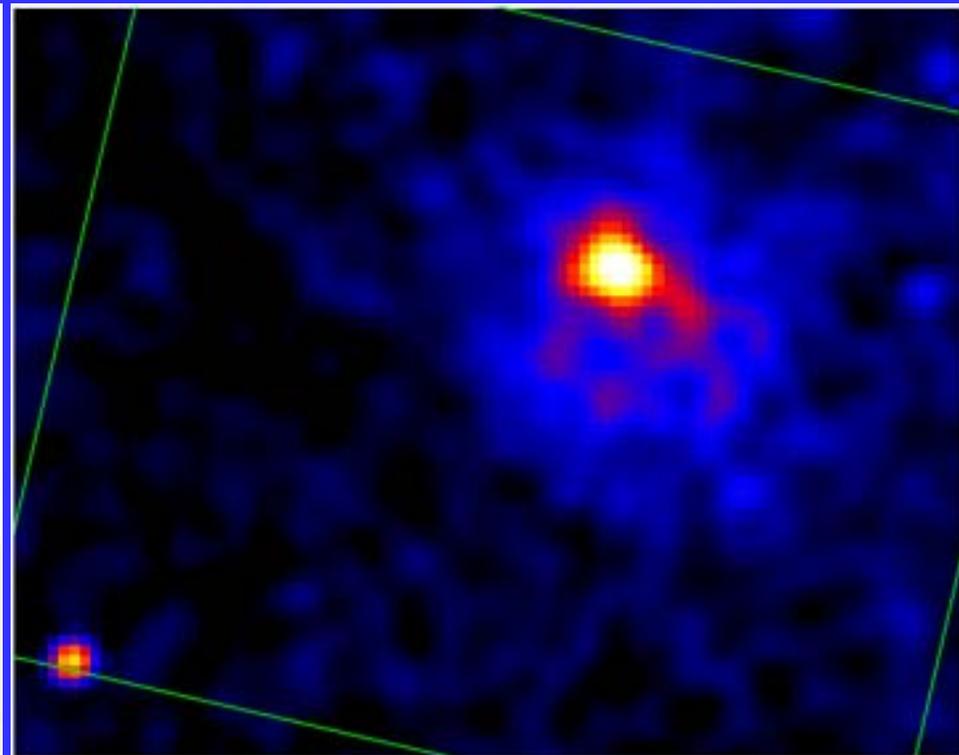
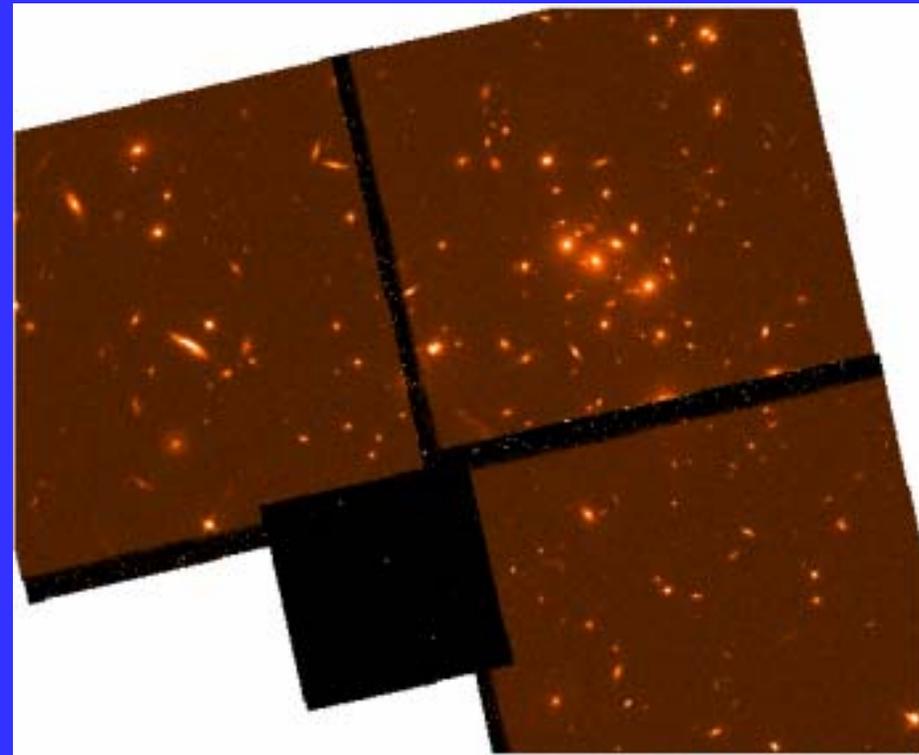
# Abell 370

$Z = 0.375$



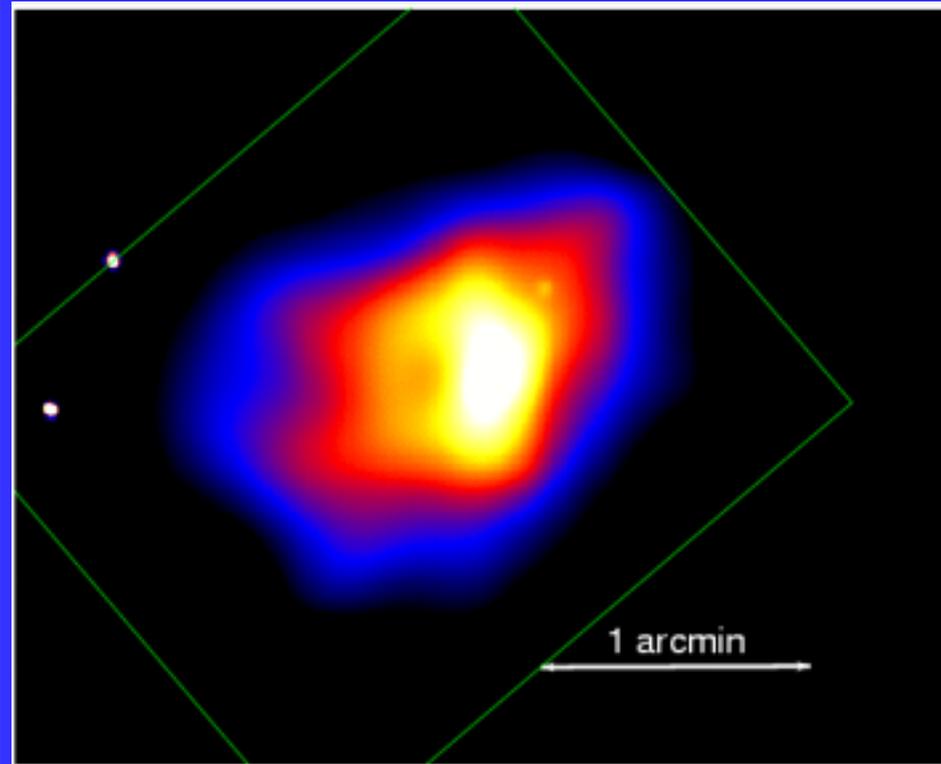
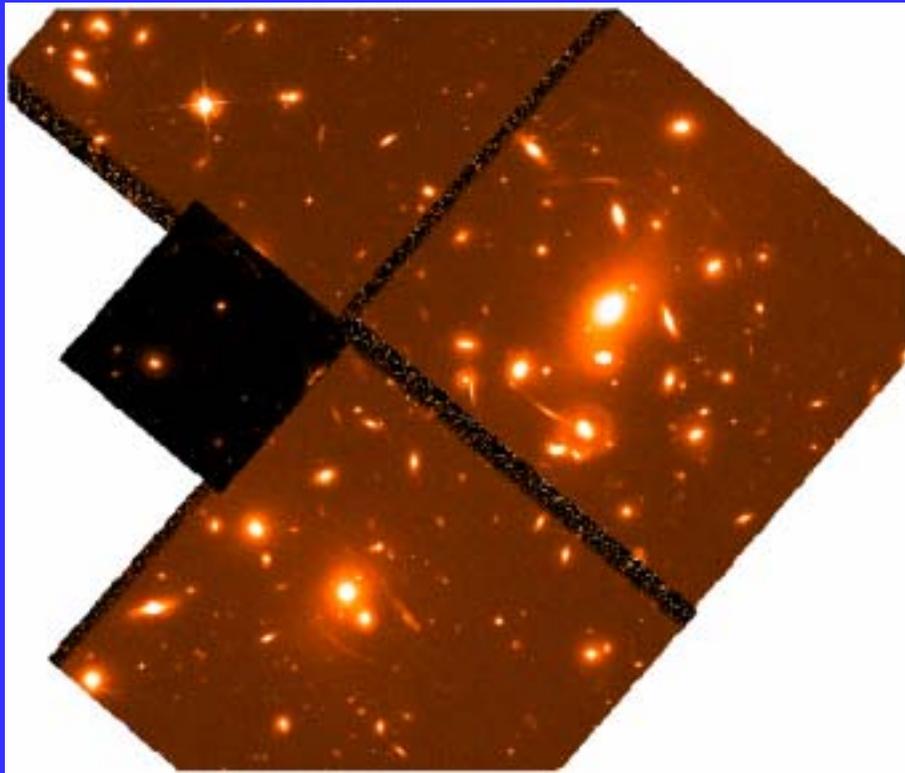
# ZwCl 0024.0+1652

$Z = 0.39$



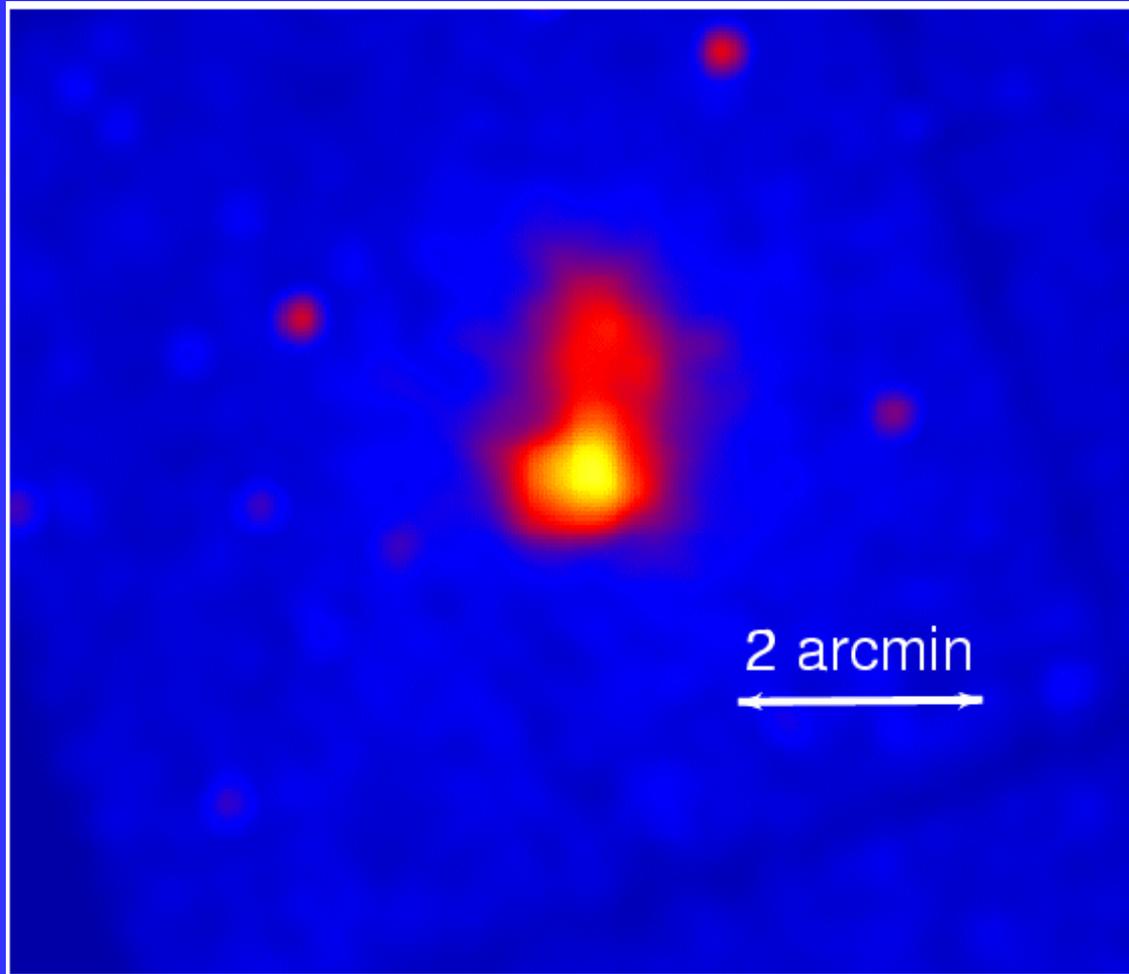
# Abell 2218

$Z = 0.1756$



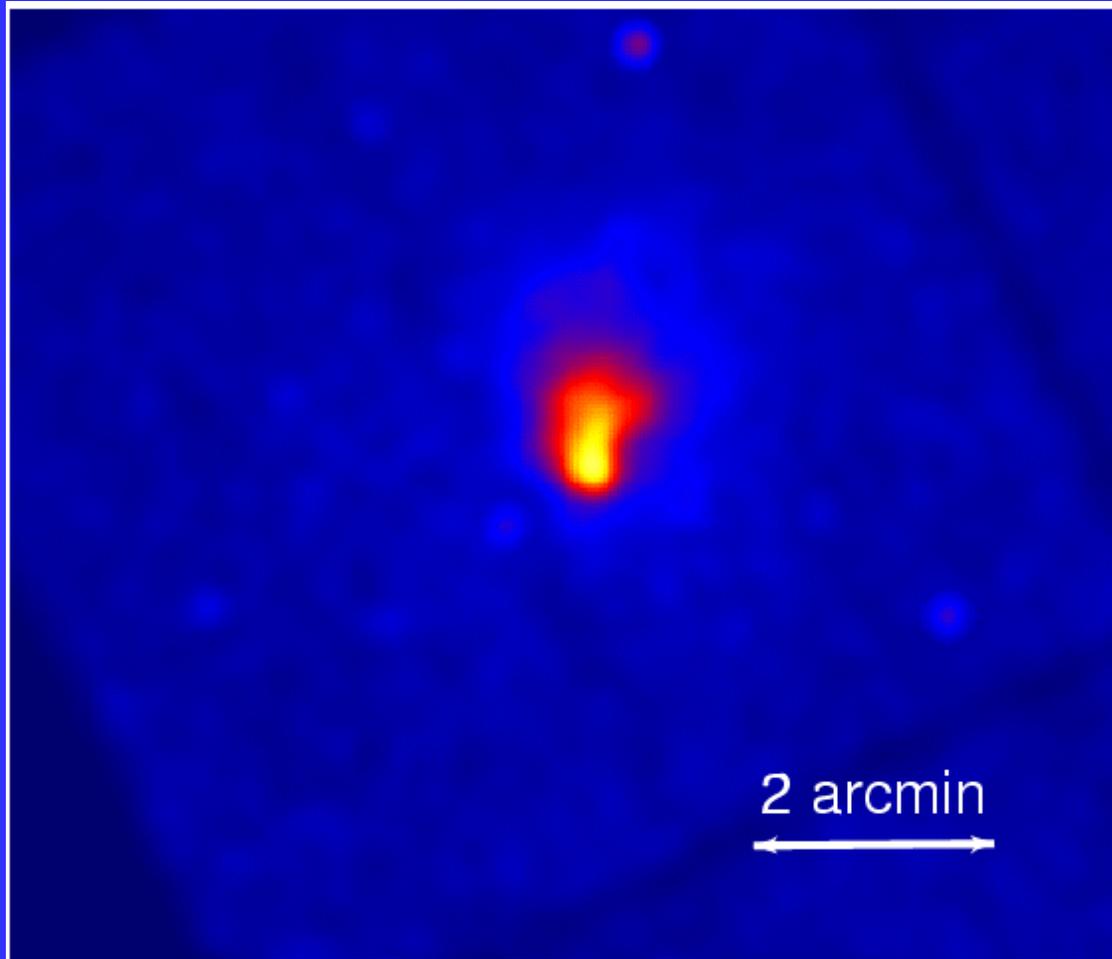
# MS 1006.0+1202

$Z = 0.221$



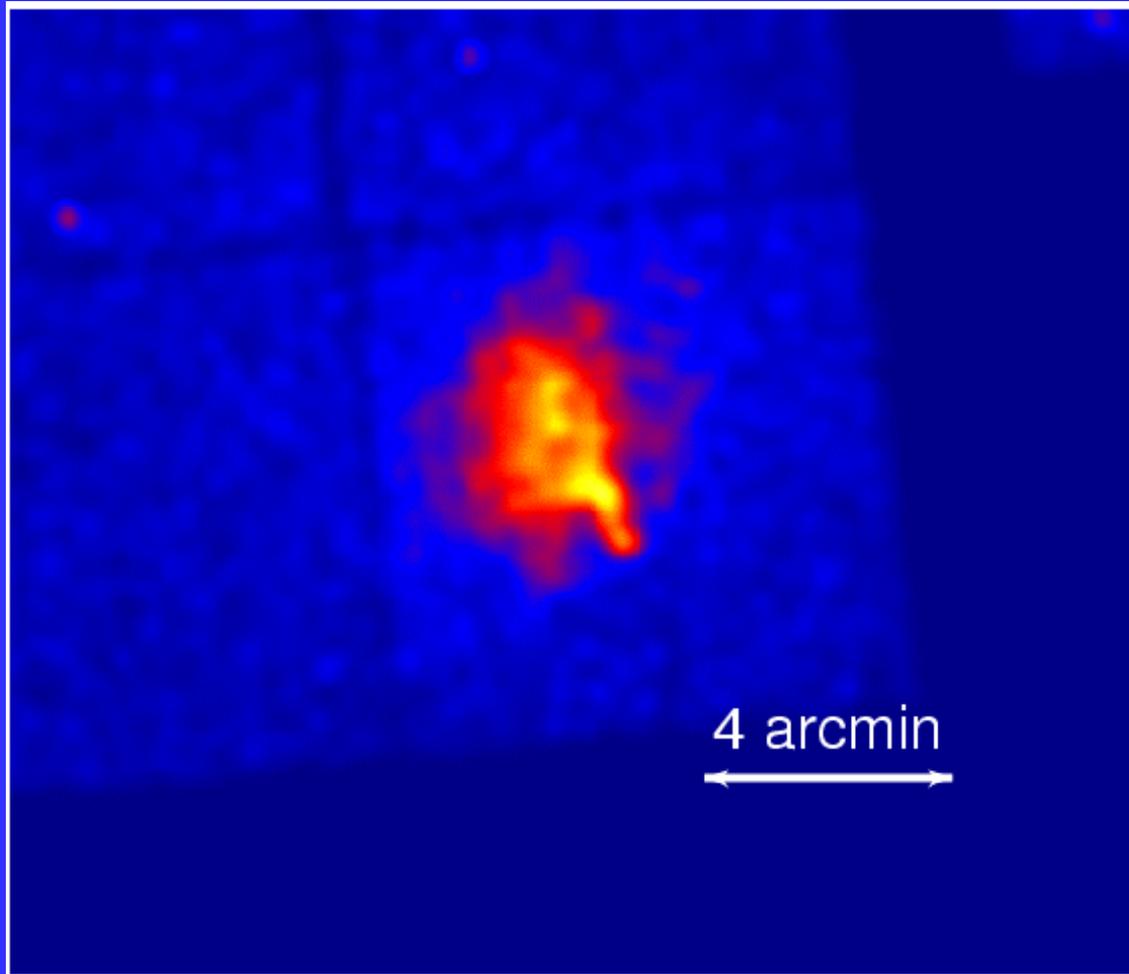
# MS 1008.1-1224

$Z = 0.301$



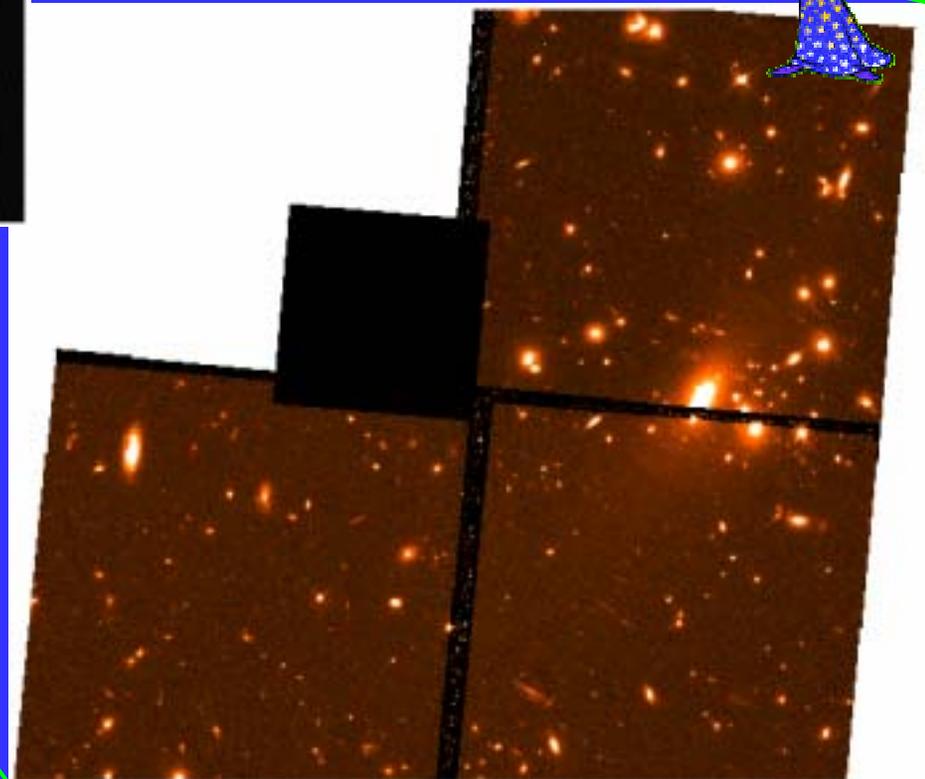
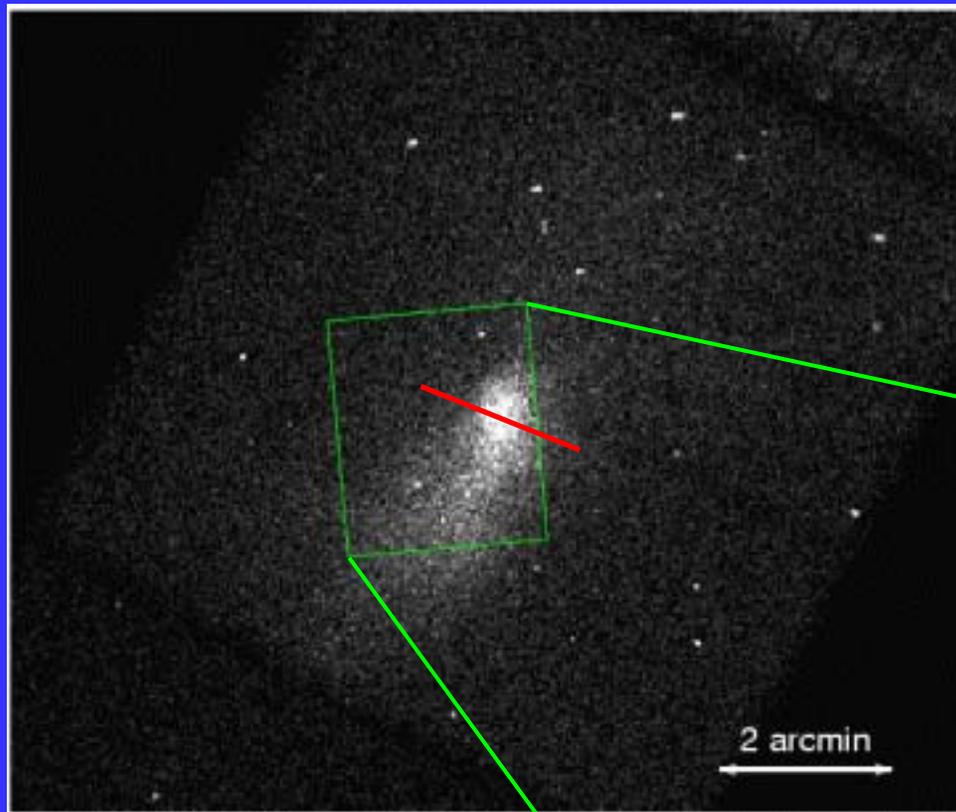
# Abell 520

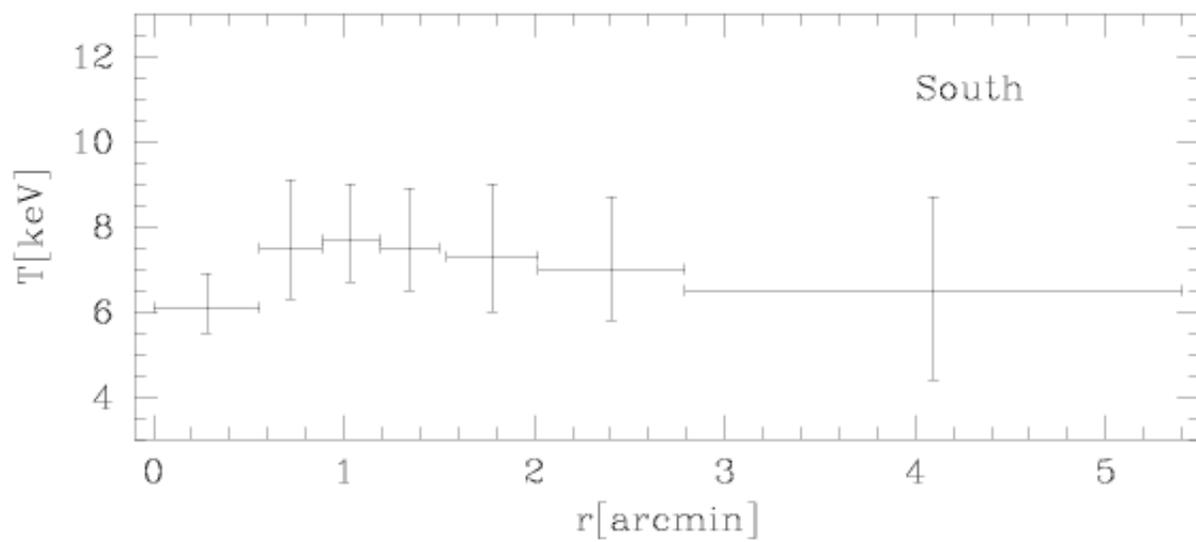
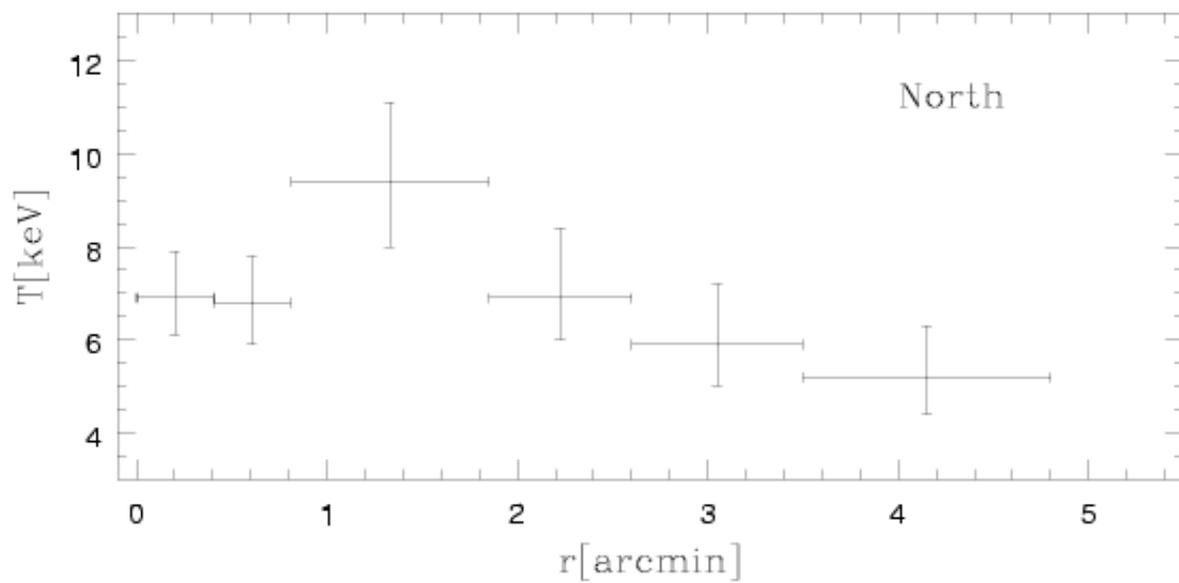
$Z = 0.199$



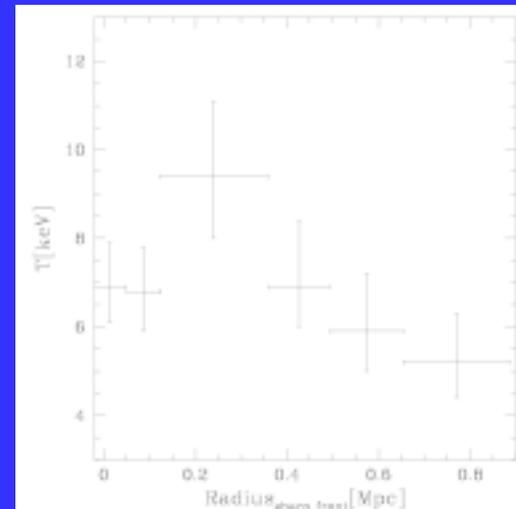
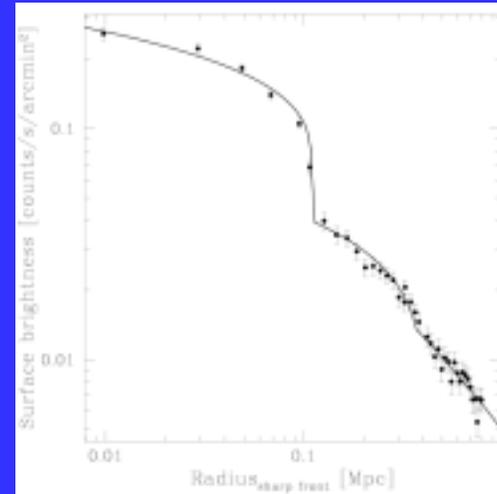
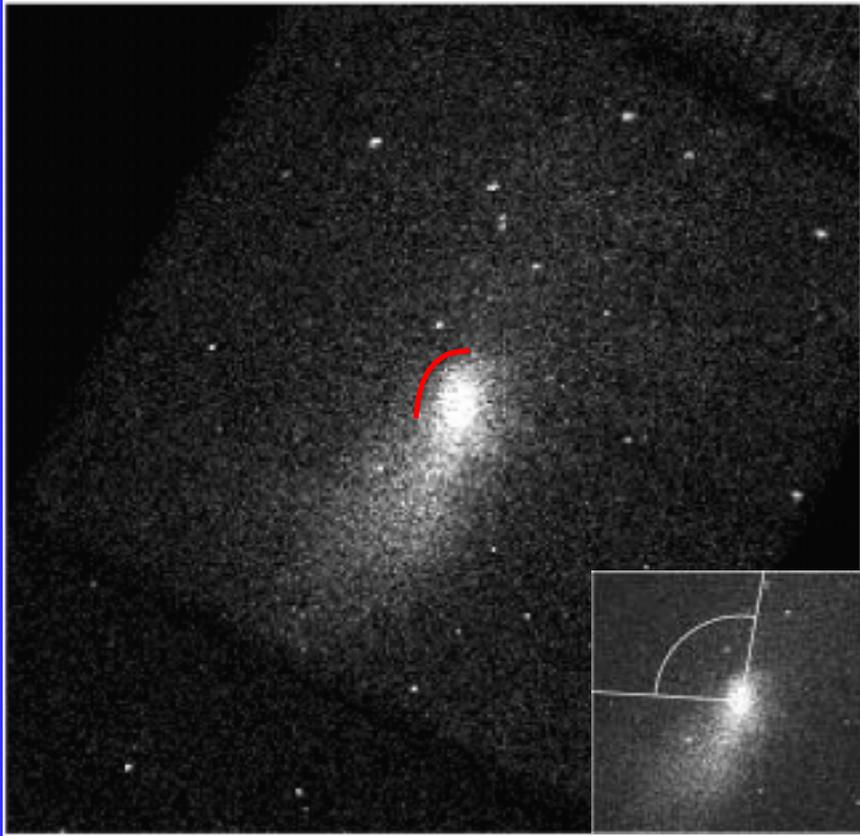
# Abell S1077 (AC 114)

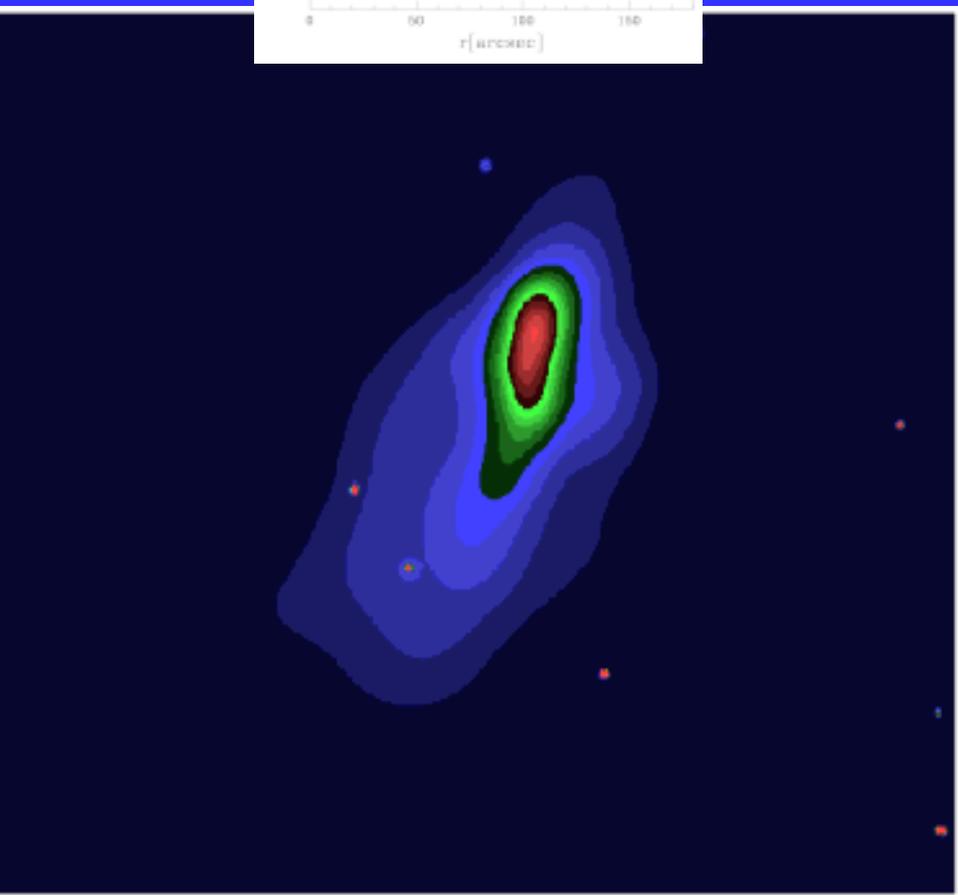
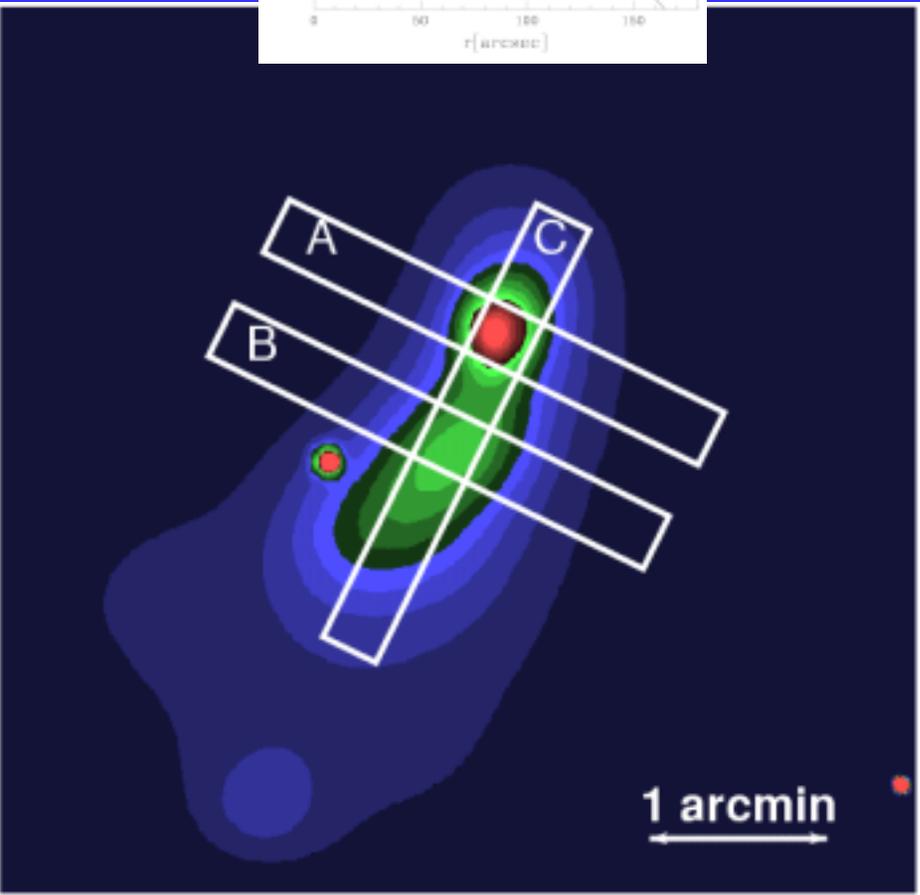
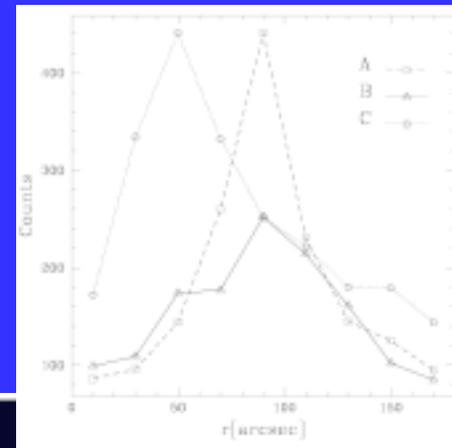
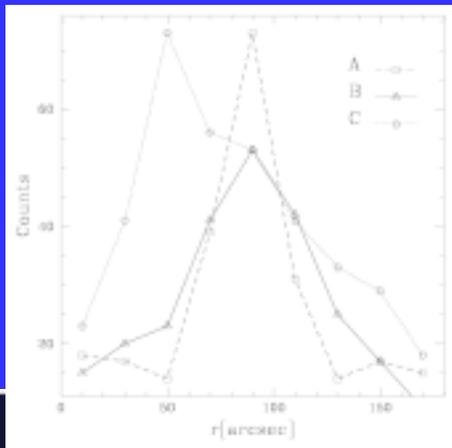
$Z = 0.313$





# A cold front and a bow shock?

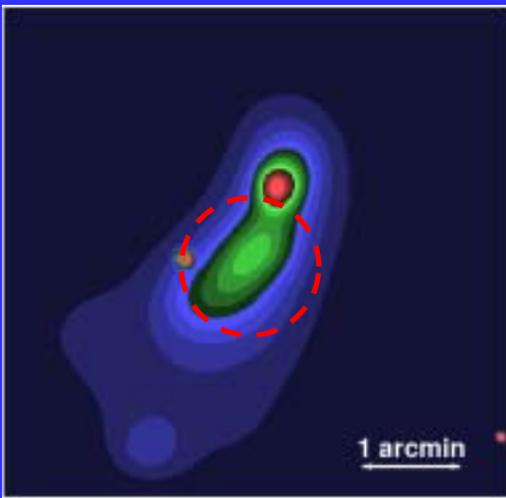
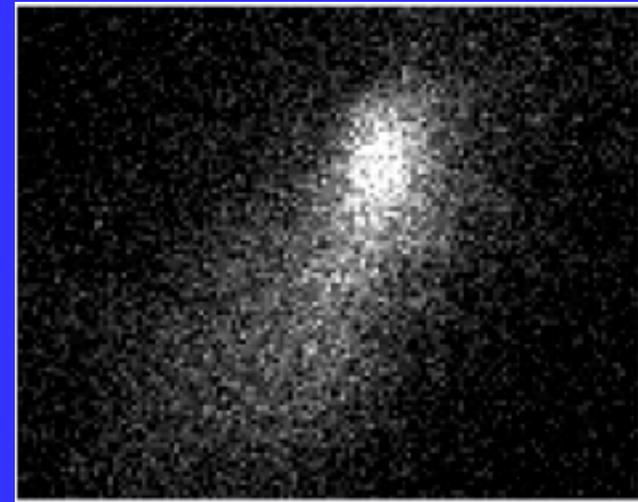




**0.1-0.3 keV**

**2.0-10.0 keV**

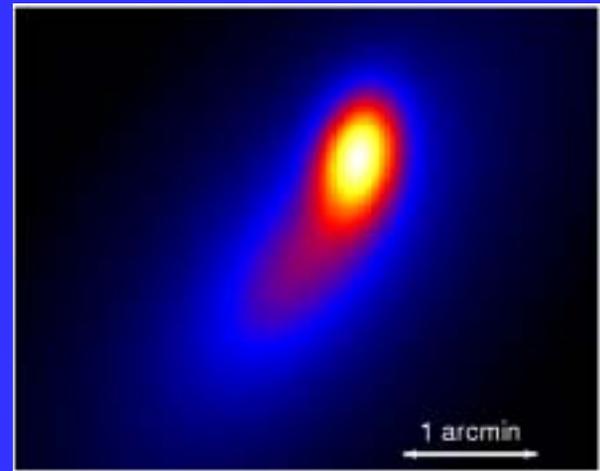
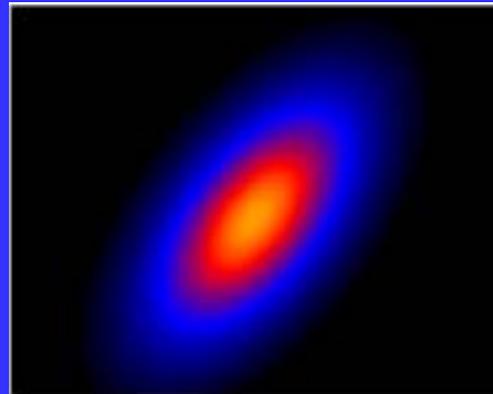
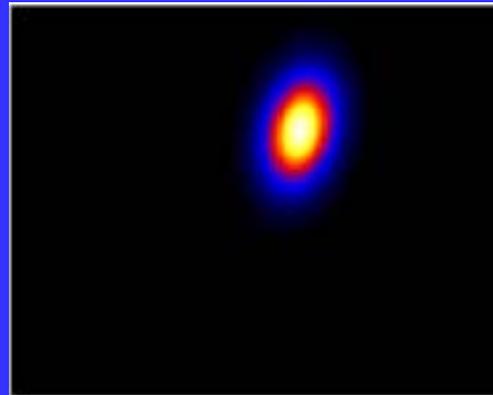
# The soft tail

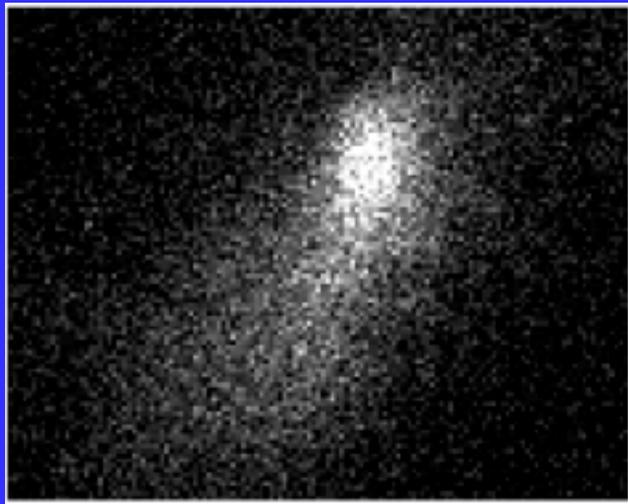


**Cluster**

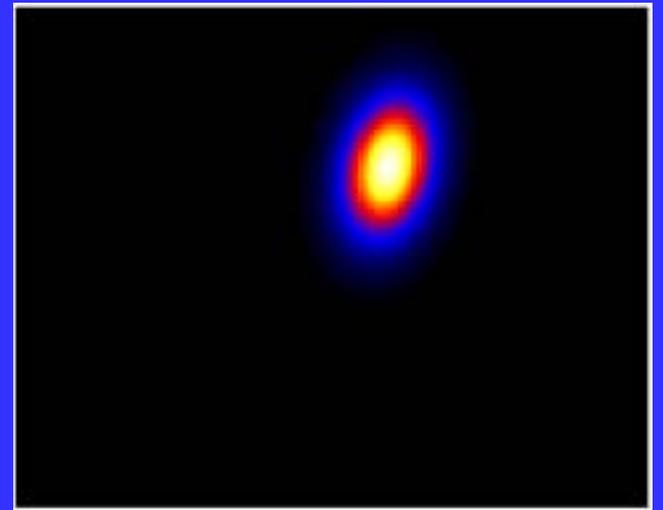
+

**Tail**

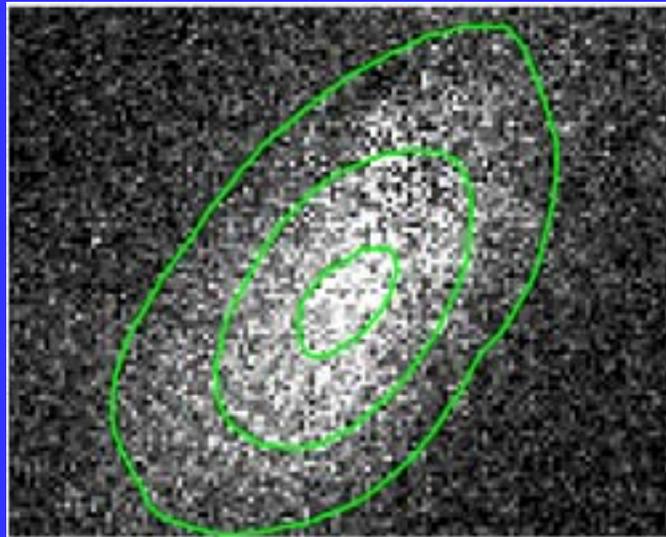




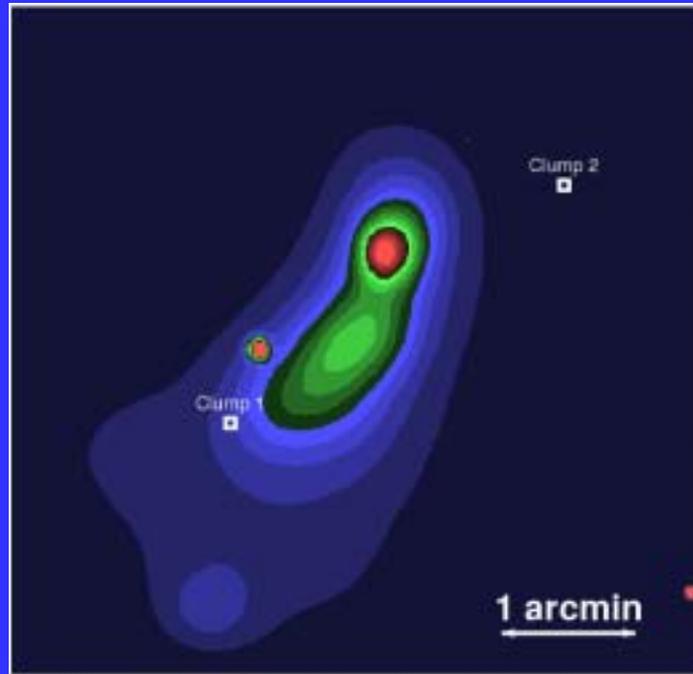
=



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# X-ray vs lensing



Campusano L. et al. 2001 A&A,378.394

## X-ray

$$M(75 \text{ kpc}) = 2.3 \cdot 10^{13} M_{\odot}$$

$$M(150 \text{ kpc}) = 8.2 \cdot 10^{13} M_{\odot}$$

$$M(500 \text{ kpc}) = 39.5 \cdot 10^{13} M_{\odot}$$

## Lensing

$$M(75 \text{ kpc}) = 4.2 \cdot 10^{13} M_{\odot}$$

$$M(150 \text{ kpc}) = 12.0 \cdot 10^{13} M_{\odot}$$

$$M(500 \text{ kpc}) = 40.0 \cdot 10^{13} M_{\odot}$$

# Combining X-ray and lensing data



Mass distribution from the X-ray analysis . . .



. . . as input for the lensing analysis



Check if predicted arcs/multiple imaged lenses are similar to the observed ones